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Valvular Heart Disease

SEVERITY OF TRICUSPID REGURGITATION AS A MARKER OF LEFT VENTRICULAR DILATION IN CHRONIC SEVERE RHEUMATIC MITRAL REGURGITATION

Poster Contributions
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Session Title: Tricuspid Regurgitation and Endocarditis
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Background: Rheumatic heart disease (RHD) is the most common cause of valvular heart disease in the developing world and a major global public health challenge. First, we examined the prevalence of tricuspid regurgitation (TR) in pediatric and adult RHD patients undergoing valvular heart surgery. Second, we assessed whether the severity of TR is a marker of left ventricular size (LVIDs) in the adult surgical patients with isolated chronic severe mitral regurgitation.

Methods: All patients with clinically severe RHD who underwent valvular heart surgery from January 2010 through December 2012 at the major academic cardiovascular hospital in Malaysia were identified from surgical operating lists. All of the patients' medical records were reviewed. 87 adult patients were identified with isolated severe MR (mild or less aortic valve disease and mitral stenosis).

Results: The prevalence of TR in the 402 adult RHD surgical patients was 80 (20%) no/trace TR, 106 (26%) mild TR, 122 (30%) moderate TR, 47 (12%) moderate-severe TR and 47 (12%) severe TR. In the 70 pediatric RHD surgical patients, 25 (36%) had no/trace TR, 20 (29%) mild TR, 16 (23%) moderate TR, 2 (3%) moderate-severe TR and 7 (10%) severe TR. In the 87 adult patients with isolated severe MR, the following numbers of patients had a LVIDs ≥ 40mm: 0/13 (0%) with no/trace TR, 10/31 (32%) mild TR, 12/27 (44%) moderate TR, 3/9 (33%) moderate-severe TR and 6/7 (86%) severe TR. Linear regression analysis of severity of TR versus LVIDs size revealed a R^2 of 0.13, a Pearson correlation coefficient 0.36, a Spearman correlation coefficient 0.33.

Conclusion: There is a higher prevalence of TR and a more severe TR phenotype in the adult versus the pediatric RHD surgical populations. In adult patients with isolated severe chronic MR, the absence of mild or greater severity TR is a marker of a non-dilated LVIDs < 40mm. There is a weak positive correlation between severity of TR and LVIDs size in adult patients with severe rheumatic MR.